REMARKS

This Amendment After Final Rejection is submitted in response to the outstanding final Office Action, dated August 15, 2005. Claims 1-3, 17-19, 23-25 and 29 are presently pending in the above-identified patent application. In this response, Applicants propose to amend claims 1, 17, and 23. No additional fee is due.

This amendment is submitted pursuant to 37 CFR §1.116 and should be entered. The Amendment places all of the pending claims, i.e., claims 1-3, 17-19, 23-25 and 29, in a form that is believed allowable, and, in any event, in a better form for appeal. It is believed that examination of the pending claims as amended, which are consistent with the previous record herein, will not place any substantial burden on the Examiner. In any case, a Request for Continued Examination is submitted herewith.

In the outstanding Office Action, the Examiner rejected claims 1-3, 17-19, 23-25 and 29 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. The Examiner also rejected claims 1-3, 17-19, 23-25 and 29 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention.

FORMAL REJECTIONS

As mentioned above, the Examiner rejected claims 1-3, 17-19, 23-25 and 29 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. In the Response to Arguments section, the Examiner asserts that the "uniform distribution allows for a better comparison," that this is not recited in the claims, and that this is precisely why the claims are not enabled. The Examiner asserts that, without a step of comparison, the steps of the claims are not enabled. The Examiner notes that the "uniform distribution may be used to determine expression patterns" and asks the question: "how is this performed on unspecified data without the step of comparison?"

Applicants note that the present disclosure teaches that a "transformation is derived from gene expression signals of control data, and is applied to gene expression signals of phenotype data." (Page 4, lines 22-23.) Thus, a transformation is first derived utilizing control data. The transformation is then applied to phenotype data. Once the transformation is applied,

better comparisons can be performed. Thus, the transformation occurs *prior* to the comparison.

Applicants also note that the cited claims are directed to a *method for transforming gene expression signals*. As noted above, the transformation is completed prior to the comparison and, thus, it would be unnecessary and inappropriate to include the comparison step. The claims have been amended, however, to emphasize that the transformation enables the comparison step. In particular, independent claims 1, 17, and 23 have been amended to require wherein said transformation allows said transformed gene expression signals to be compared. Note that the derived transformation is a tangible and useful result and that the actual execution of a comparison step is not necessary to produce the derived transformation.

Given the above remarks, Applicants respectfully request reconsideration and withdrawal of the rejections of claims 1-3, 17-19, 23-25 and 29 under 35 U.S.C. §112, first paragraph.

Claims 1-3, 17-19, 23-25 and 29 were also rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. In the Response to Arguments section, the Examiner asserts that the steps are circular, and that the uniform distribution of the transformed gene expression signals in an interval has already been transformed. The Examiner asks "what is the step of 'wherein the gene expression signal is converted by the transformation into a transformed gene expression signal?'"

As noted above, the present disclosure teaches that a transformation is first derived utilizing control data. The transformation is then applied to phenotype data. Once the transformation is applied, better comparisons can be performed. Thus, the transformation occurs *prior* to the comparison. Independent claims 1, 17, and 23, as amended, require deriving a transformation for transforming the plurality of gene expression signals into transformed gene expression signals for the gene, wherein application of said transformation results in a uniform distribution of the transformed gene expression signals within a selected interval, wherein each gene expression signal is converted by the transformation into a transformed gene expression signal in the selected interval, wherein said transformation allows said transformed gene expression signals to be compared, and wherein the uniform distribution of transformed gene

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expression signals may be used to determine gene expression patterns. Thus, claims 1, 17, and 23 require two steps: (1) determining a plurality of gene expression signals for a gene; and (2) deriving a transformation. The recited steps are not circular since the determining step properly occurs prior to the deriving step, as would be apparent to a person of ordinary skill in the art.
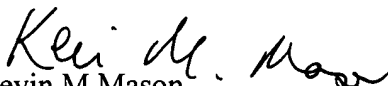
Applicants respectfully request reconsideration and withdrawal of the rejections of claims 1-3, 17-19, 23-25 and 29 under 35 U.S.C. §112, second paragraph.

In view of the foregoing, Applicants submit that all of the pending claims, i.e., claims 1-3, 17-19, 23-25 and 29, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,

Date: November 15, 2005

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